

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

1. (Previously Presented) A circuit, comprising a comparator having an output and a pair of inputs, wherein the pair of inputs are adapted to receive an output signal produced from the circuit and a reference voltage forwarded to the circuit, and wherein the circuit further comprises:
 - a pull-down transistor connected to one of the pair of inputs and the output; and
 - a pull-up transistor having a gate conductor and a source-to-drain current path coupled between a power supply and one of the pair of inputs whenever a voltage of an input signal coupled to the gate conductor exceeds a voltage of the output signal by a threshold voltage of the pull-up transistor.
2. (Original) The circuit as recited in claim 1, wherein said one of the pair of inputs is coupled to receive the output signal.
3. (Original) The circuit as recited in claim 1, wherein the positive input of the pair of inputs is adapted to receive the output signal and the negative input of the pair of inputs is adapted to receive the reference voltage.
4. (Previously Presented) The circuit as recited in claim 1, wherein the pull-down transistor comprises a gate conductor and a source-to-drain current path between said one of the pair of inputs and a ground supply voltage whenever a voltage of the output coupled to the gate conductor exceeds the reference voltage.
5. (Original) The circuit as recited in claim 1, further comprising a current source coupled in parallel with the pull-down transistor between said one of the pair of inputs and a ground supply voltage.
6. (Canceled)

7. (Currently Amended) A system for adjusting a pulse width of an output signal, comprising:

a circuit for maintaining a reference voltage between positive and negative voltage peaks of the output signal;

a comparator coupled to compare a voltage of the output signal to the reference voltage;

a pull-down transistor coupled to an output of the comparator for fixing a minimum voltage of the output signal to a voltage approximately equal to the reference voltage whereby the pulse width of the output signal varies in proportion to changes in the reference voltage; ~~and~~

wherein the comparator comprises a slew rate and/or gain which is predetermined to preclude a voltage of the output signal from being less than the reference voltage; ~~and~~

wherein the output signal comprises a duty cycle that varies in proportion to changes in the reference voltage.

8. (Canceled)

9. (Original) The system as recited in claim 7, wherein the circuit is adapted to increase the reference voltage and thereby cause a corresponding decrease in the pulse width and a duty cycle of the output signal.

10. (Original) The system as recited in claim 7, wherein the circuit is adapted to decrease the reference voltage and thereby cause a corresponding increase in the pulse width and a duty cycle of the output signal.

11. (Previously Presented) The system as recited in claim 7, wherein portions of the output signal below the reference voltage are chopped and removed at the reference voltage.

12. (Canceled)

13. (Previously Presented) The system as recited in claim 7, wherein the pull-down transistor comprises a gate conductor and a source-to-drain current path, wherein the gate conductor is coupled to receive an output from the comparator and the source-to-drain current path is maintained during times when the reference voltage is maintained at approximately a midline voltage between the positive and negative voltage peaks of the output signal.

14. (Original) The system as recited in claim 13, wherein the comparator comprises a predefined slew rate and/or gain so that an output voltage from the comparator will not go below a threshold voltage of the pull-down transistor.

15. (Original) The system as recited in claim 7, further comprising an optical signal transmitter coupled to receive the output signal.

16. - 19. (Canceled)